Monitoring Data Record

Project Title: U-3110A (Cook Road Connector) COE Action ID: 199700602
Stream Name: Michael's Branch DWQ Number: 021105
City, County and other Location Information: University Drive off of I-40 in Alamance County
Date Construction Completed: December 2003 Monitoring Quarter: (8) of 8
Ecoregion: 8 digit HUC unit 03030002
USGS Quad Name and Coordinates:
Rosgen Classification:
Length of Project: 780' Urban or Rural: Urban Watershed Size:
Monitoring DATA collected by: M. Green & J. Young Date: 6/14/07
Applicant Information:
Name: NCDOT Roadside Environmental Unit
Address: 1425 Rock Quarry Rd. Raleigh, NC 27610
Telephone Number: (919) 861-3772 Email address: mlgreen@dot.state.nc.us
Consultant Information:
Name:
Address:
Telephone Number: Email address:

Project Status: Complete

Monitoring Level required by COE and DWQ (404 permit/ 401 Cert.): Level (1) ~~2~~ ~~3~~
Monitoring Level 1 requires completion of *Section 1, Section 2 and Section 3*

Permit Conditions: The permittee shall visually monitor the vegetative plantings on all mitigation streambanks to access and insure complete stabilization of the mitigation stream segments. This monitoring shall include adequate visual monitoring of planted vegetation quarterly for a minimum of two years after final planting, and appropriate remedial actions (e.g., replanting, streambank grading, ect.). If within any monitoring year, bank stabilization is not acceptable as determined by the Corps of Engineers, and remedial action required by the Corps of Engineers is performed, the one year monitoring of the affected portions of the stream will begin again.

Section 1. PHOTO REFERENCE SITES
(Monitoring at all levels must complete this section)

Total number of reference photo locations at this site: A total of 13 photos were taken from 7 photo point locations.

Dates reference photos have been taken at this site: 9/28/05, 12/20/05, 4/5/06, 7/19/06, 10/19/06, 1/10/07, 4/19/07, 6/14/07

Individual from whom additional photos can be obtained (name, address, phone):

Other Information relative to site photo reference:

If required to complete Level 3 monitoring only stop here; otherwise, complete section 2.

Section 2. PLANT SURVIVAL
Attach plan sheet indicating reference photos.

Identify specific problem areas (missing, stressed, damaged or dead plantings):

Estimated causes, and proposed/required remedial action:

ADDITIONAL COMMENTS: The site was live staked and the buffer area was reforested in February 2005. Hardwood vegetation noted on site includes: black willow, silky dogwood, tag alder, river birch, sycamore, blackgum, tulip poplar, and green ash. Other vegetation on site includes: *Juncus* sp., multi-flora rose, jewelweed, goldenrod, lespedeza, queen ann's lace, briars, cattail, and various grasses. NCDOT has completed two years of quarterly monitoring and proposes to discontinue vegetation monitoring at the Michael's Branch Mitigation Site.

If required to complete Level 1 and Level 2 monitoring only stop here; otherwise, complete section 3.

Section 3. CHANNEL STABILITY

Visual Inspection: The entire stream project as well as each in-stream structure and bank stabilization/revetment structure must be evaluated and problems addressed.

Report on the visual inspection of channel stability. Physical measurements of channel stability/morphology will not be required. Include a discussion of any deviations from as-built and an evaluation of the significance of these deviations and whether they are indicative of a stabilizing or destabilizing situation.

This is the 8th quarterly monitoring visit for the Michael's Branch Mitigation Site. There have been four documented bankfull events at the Michael's Branch Mitigation Site since monitoring began in September 2005. The minor bank erosion that has been previously noted during past monitoring evaluations at Sta. 12+90 is highly stabilized at this time. It appears a new bankfull bench is developing along the left bank in this area. NCDOT has completed two years of quarterly monitoring and proposes to discontinue stream stability monitoring for the Michael's Branch Mitigation Site.

Date	Station Number	Station Number	Station Number	Station Number	Station Number
Structure Type					
Is water piping through or around structure?					
Head cut or down cut present?					
Bank or scour erosion present?					
Other problems noted?					

NOTE: Attach separate narrative sheets to each monitoring report describing/discussing the overall monitoring results. Include the identification of specific problem areas/channel failures, estimated cause and proposed/required remedial action. This should include a brief discussion of any parameter that has changed significantly from as-built.

Michael's Branch

PP #1 (Upstream-East of University Drive)

PP #2 (Downstream-West of University)

PP #3 (Upstream-Cross Section #1)

PP #3 (Downstream-Cross Section #1)

PP #4 (Upstream-Cross Section #2)

PP #4 (Downstream-Cross Section #2)

Michael's Branch

PP # 5 (Upstream-North of Sub-division Bridge)

PP #5 (Downstream-North of Sub-division Bridge)

PP #6 (Upstream-South of Sub-division Bridge)

PP #6 (Downstream-South of Sub-division Bridge)

PP#7 (Overview of Site Looking Downstream Towards the Sub-division Bridge)

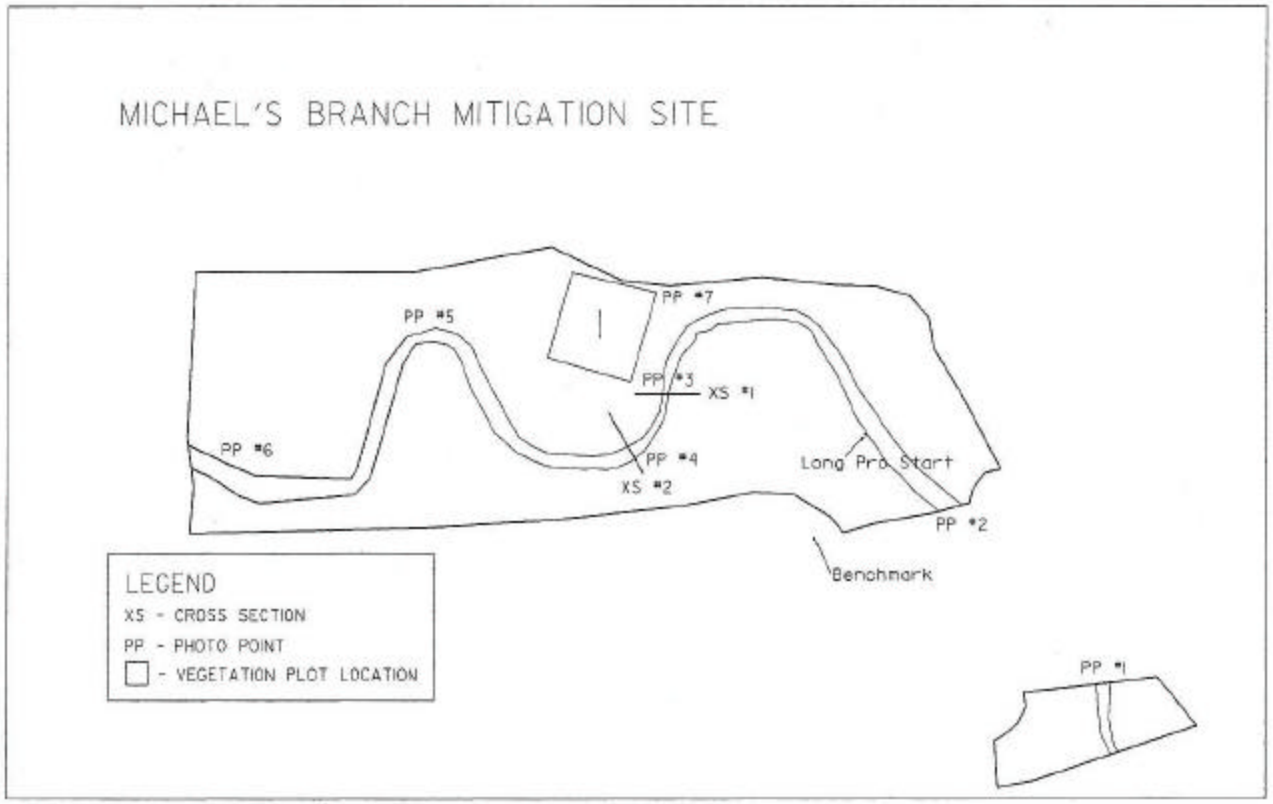
June 2007

Michael's Branch

PP#7 (Overview of Site Looking Across Site at University Drive)

PP #7 (Overview of Site Looking Upstream Towards University Drive)

June 2007


MICHAEL'S BRANCH MITIGATION SITE
PP #5
PP #7
1
PP #3
XS #1
PP #6
PP #4
XS #2
Long Pro. Start
PP #2
Benchmark
LEGEND
XS - CROSS SECTION
PP - PHOTO POINT
- VEGETATION PLOT LOCATION
PP #1